

# **POWER-RELATIONS AND INFORMATION SYSTEMS DEVELOPMENT**

A thesis submitted in fulfillment of the requirements of the degree

Doctor of Philosophy

(C02029)

from

University of Technology, Sydney

by

Adam Hart, B.Bus., Accounting (UTS) M.Com., Information Systems (UNSW)

School of Systems, Management and Leadership

Faculty of Engineering and Information Technology

2014

## **Certificate of Original Authorship**

I, Adam Hart, certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Signature of Student:

A handwritten signature in black ink, reading "Adam Hart", is written on a light-colored, slightly textured background.

Date: 10<sup>th</sup> October 2014

## Acknowledgements

I'd like to thank my dear wife Rita and my sons Ronan and Connor for all their support and love. I would also like to thank Dr. Jim Underwood for his patience, guidance and teaching over the last seven years.

## **List of publications produced during this research**

The following double-blind peer reviewed conference papers were produced during this research. They are an original contribution and are germane to the arguments presented in this thesis:

Hart, A and Underwood, J. (2010) Ed. Esteves, J. “Traversing the Edge: Using Discourse Analysis to Understand IS Power-Relations” Proceedings of the 9<sup>th</sup> European Conference for Research Methods in Business, pp. 175-182, 2010. Academic Conferences Ltd., UK.

Hart, A. and Underwood, J. (2012) Ed. Lamp, J. “Power and discourse in information systems practice: a narrative research method.” Proceedings of the 23<sup>rd</sup> Australasian Conference on Information Systems, pp. 1-8, 2012. Deakin University, Geelong, Victoria, Australia.

Where applicable these have been both been referenced in the body of the thesis and are also listed in the bibliography. The authors hold the copyright and provided a non-exclusive license to the conference organisers at the time of publication.

## Thesis Abstract

Problems of communication in the interplay between the information systems professional and their clients have resulted in a preponderance of methods and frameworks of structured interaction that have failed to produce consistently successful outcomes, and in the author's professional experience are ignored as impractical to confront the chaos of the day to day micro level that shape outcomes. What seems to be more germane to understand in the problem of communication is the relations of power between participants. And, if we accept that perspective of power as a relation that is important to understand in analysing the problem of communication, we must necessarily choose to delve further than the mainstream IS literature where the power of A over B, or the power of A to enable B dominates, because such trajectories ignore three important aspects. Firstly, the entanglement of these IS researchers and authors themselves in a relation of power with power as an object which is itself party to rhetoric that seems to be concerned with ethical or partisan debate (cf. Lucas, 1984; Stahl, 2008, Rowlands and Kautz, 2013). Secondly, in treating power as an object, the network of possible complex relations where power could be said to happen is bypassed in favour of a simpler actor-centric model. Thirdly, and most importantly for this research, is the possibility that power must necessarily not only occur in the skills and techniques of the information systems professional (*techne*) but also in the interplay of knowledges (*episteme*) that are deployed at the times of communication with their embedded rationalities (cf. Bjorn-Andersen and Eason, 1980; Law, 1991; and Baunsgaard and Clegg 2013). Broadly speaking for us, power-relations are deployed in the potential interplay between discourses, where discourse defines the boundaries of potentially competing, simultaneously operating and conflicted epistemologies.

In order to accommodate these points, we determined to conduct an interpretative epistemological analysis of the possible power-relations that the information systems professional may be subject to. To do this we broadly sought to follow Foucault (1969) and conduct an archaeology of the knowledge, obtained by open ended interview, of the narrative histories of eight ISD professionals, who came from a diverse set of backgrounds and perspectives spanning project management, systems

programming, systems and business analysis, technology and business management, medicine, and systems infrastructure and networking.

The approach we took was firstly to excavate their narratives for significant epistemological elements, elements that seem to hold epistemological significance for the person, horizontally identifying shared and non-shared elements as well. These elements are then vertically transposed to a maximum available set of possible epistemological meanings independent of their origin in the narrative, with identification of groupings of lexical siblings and antonyms becoming the discursive formations. This allows us to express an opinion as to the operative epistemological power-relations in terms of which are superordinate and thus whose knowledge has a possibility of realisation and which are subordinate and have less possibility of realisation depending on the other formations encountered.

In brief, we found that those information systems professionals who know through discursive formation of Idealism, for example an ideal type of computer or database configuration, were subordinated in favour of those who know through Imperatives, for example the imperative of remuneration, profit or time commitments. Interestingly, many of the professionals had both formations present in their narrative, showing that more than one epistemological formation can be ‘inside’ or carried by one individual. We also found that information systems professionals who know through a Law type formation, for example, certainty of diagnosis, do not relate to the other formations, sitting superordinate, aloof and even ignorant of other formations. When different formations interact, it is possible that a traversal to another discursive formation occurs, or that the home formation is retained but it retreats or ‘shrinks’ away, so that it’s epistemological rules are perhaps forgotten for a while (Grint et al, 1996) in favour of the superordinate rules of knowing.

We also found that there is a formation which distinctly marks boundaries between discourse, and that this was present in most instances, confirming the suspicion that discourses are multiple and in recurring conflict, creating the necessary possibility for power-relations to exist. Also, inspecting the behaviour or rules of the formations themselves, we also identified in the imperative formation epistemological strategies of trade-offs and adversaries, where other formations may also be that adversary (such

as knowing through evidence as in the formation of enquiry). The presence of the Imperative formation was found to be the most regularly occurring superordinate function with the exception of the Law formation. This implies that if information systems professionals unconsciously choose or are educated to know through Idealism, such as the ideal to ‘love’ computing and revel in its perfection, this means that their thought will be subordinated frequently by other the formations of Imperatives which surround them and which they will be required to absorb in an industry and organisational context.

Our research has therefore shown that epistemological power-relations is not only a theoretical notion but a reality that creates conflict and can disharmonise the best attempts of structured interaction by operating at a level beneath consciousness (Gutting, 2008), improving on the breadth of understanding in the IS literature on power. We do not support the ethical and partisan attempts to ‘neutralise’ power by relegating its status to an object level, but instead believe and have demonstrated that power as a network is a superior way to perceive power; unearthing the discursive formations of adversaries and tradeoffs, enquiry and idealism as a pathway to form an awareness of what is happening to knowledge. This has given us the discursive functions of forgetting, traversal and retreat, which has improved the understanding and potential use of Foucault’s archaeological analysis of power-relations under conditions of multiple and contemporary discourse.





## Table of Contents

Certificate of Original Authorship .....	ii
Acknowledgements.....	iii
List of publications produced during this research .....	iv
Thesis Abstract.....	v
Table of Contents.....	ix
Table of Figures .....	xi
<b>Chapter 1 – Introduction, Approach and Contribution .....</b>	<b>1</b>
Introduction.....	1
Approach.....	5
Contribution.....	5
Structure of this thesis.....	6
<b>Chapter 2 – Literature Analysis.....</b>	<b>9</b>
Introduction.....	9
Opening remarks on the direct approach to the study of power.....	11
The power of A over B – Power Over.....	11
Power Over <i>and</i> Power To .....	12
The ‘problem’ of power and information systems.....	14
Further alternate direct views of power in the IS literature – 1980 to 1999 .....	18
The circuits of power framework .....	22
Concluding remarks on the direct approach to the study of power .....	24
The indirect or <i>structural</i> study of power .....	26
Deconstruction or construction.....	31
Power-relations and epistemological concerns .....	35
Closing Remarks .....	38
<b>Chapter 3 – Theory .....</b>	<b>41</b>
Purpose.....	41
The archaeology of knowledge .....	41
Orientating distinctions .....	43
Knowledge: Connaissance and Savoir.....	43
Language: Parole/Langue.....	43
Synchronic/Diachronic.....	44
Condition of Possibility/Condition of existence.....	44
Subordinate and superordinate .....	44
Texts, statements, discourse.....	45
Discursive formation, system of formation, law, episteme.....	46
Suitability of the theory to study power.....	48
About the potential difficulties of studying contemporary, simultaneous and subordinate formations.....	50
Closing Remarks .....	53
<b>Chapter 4 – Approach to Data Collection and Analysis .....</b>	<b>55</b>
Purpose.....	55
Design of methodological components.....	55
Design of data collection .....	57
Evolution of the analysis approach .....	61
Design of interpretation (Ch. 5 Pt. 1) and analysis (Ch. 5 Pt. 2).....	63

Design of ethics & administration .....	67
Closing Remarks .....	68
<b>Chapter 5, Part 1 - Narrative data excerpts and interpretation .....</b>	<b>71</b>
Approach to Part 1.....	71
D.'s narrative. ....	73
M.'s. narrative. ....	82
T.'s narrative.....	90
S.'s narrative .....	97
J.'s narrative .....	104
T2.'s narrative (the second T.) .....	110
Y.'s narrative. ....	115
I.'s narrative.....	121
Closing Remarks to Part 1 .....	128
<b>Chapter 5, Part 2 – Lexicon of elements. Discursive formations .....</b>	<b>131</b>
Approach to Part 2.....	131
Lexicon of elements.....	132
Remarks on the possible grouping of lexical elements.....	140
Determination of discursive formations, their operation, rules and trajectory. ....	143
Concluding Remarks.....	149
<b>Chapter 6 – Summary and Conclusions .....</b>	<b>151</b>
What we did.....	151
What does it mean?.....	154
Research applicability and future opportunities.....	156
What can we do about epistemological power? .....	159
Application of the research to the effectiveness of ISD Professionals .....	167
<b>Bibliography .....</b>	<b>169</b>
<b>Appendix A – Personal Consent Form .....</b>	<b>177</b>
<b>Appendix B – Participant Information Sheet.....</b>	<b>179</b>

## Table of Figures

Figure 1 – Methodological components .....	55
--	----

